

**Item #15**  
**May 4, 2011**  
**Energy Commission Business Meeting**

**PARKER-HANNIFIN CORP**

**Grant Agreement ARV-09-011**  
**for**  
**Medium & Heavy Duty Vehicle Development**

**Summary**

Coca-Cola Enterprises, with Parker Hannafin Corporation as a partner, was awarded \$750,000 to demonstrate heavy-duty hybrid hydraulic beverage delivery trucks. Coca-Cola is requesting Parker Hannafin Corporation be the Grant Recipient for the vehicle demonstration. Coca-Cola Enterprises will partner in the project.

The goal of the project is to achieve between 40 to 50 percent fuel efficiency improvements. An innovative direct driveline connection will enable the truck to operate in series hydraulic mode, in pure mechanical mode at higher speeds, or in a blended mode that will optimize drive-train efficiency between hydraulic and mechanical drive.

This hydraulic-hybrid system stores less energy, but should more effectively recover braking energy thus potentially matching electric-hybrid vehicle benefits.

**Benefits**

Each truck will save about 5,200 gallons of petroleum diesel per year and reduce 82 tons of CO2 emissions annually. Approximately 40 jobs will be maintained and created for assembly. In addition, local maintenance and service support jobs will be created for the hydraulic hybrid units. Manufacturing, maintenance, and service support jobs will be created within each of the companies involved with this project.

**Participants**

**Parker Hannifin Corporation** will serve as project manager and coordinator; and will design, build, and install the hydraulic-hybrid components.

**Coca-Cola Enterprises** will evaluate the performance of the new hydraulic-hybrid delivery vehicles.

The **Freightliner Truck Division** of Daimler Trucks North America will provide the chassis and power train, as well as technical support.

**Cummins** is the largest producer of heavy-duty engines in the nation and will provide the engines and technical support.

The **South Coast Air Quality Management District** will provide project management support.

### **Implementation Schedule**

Hydraulic-hybrid delivery trucks will be commissioned by the first quarter of 2013.

### **CEQA**

The Chief Counsel's Office has reviewed this project to determine what level of environmental review is necessary under the California Environmental Quality Act (CEQA) and recommends including a finding that the amendment is "not a project" and therefore not subject to environmental review.